TABLE 1. Numbers of *C. pinus maritima* captured in traps baited with *C. pinus pinus* sex pheromone components.

Ratio of (85:15) (E:Z)-11-14:Ac to (85:15) (E:Z)-11-14:OH	% concentration by weight	Mean number of males per trap[1]
1:1	0.3	3.75 a
9:1	0.03	4.08 a
1:1	0.003	0.50 b
control		0.00 b

[1] Means followed by different letters are significantly different ($P < 0.0085$), Wilcoxon two-sample test.

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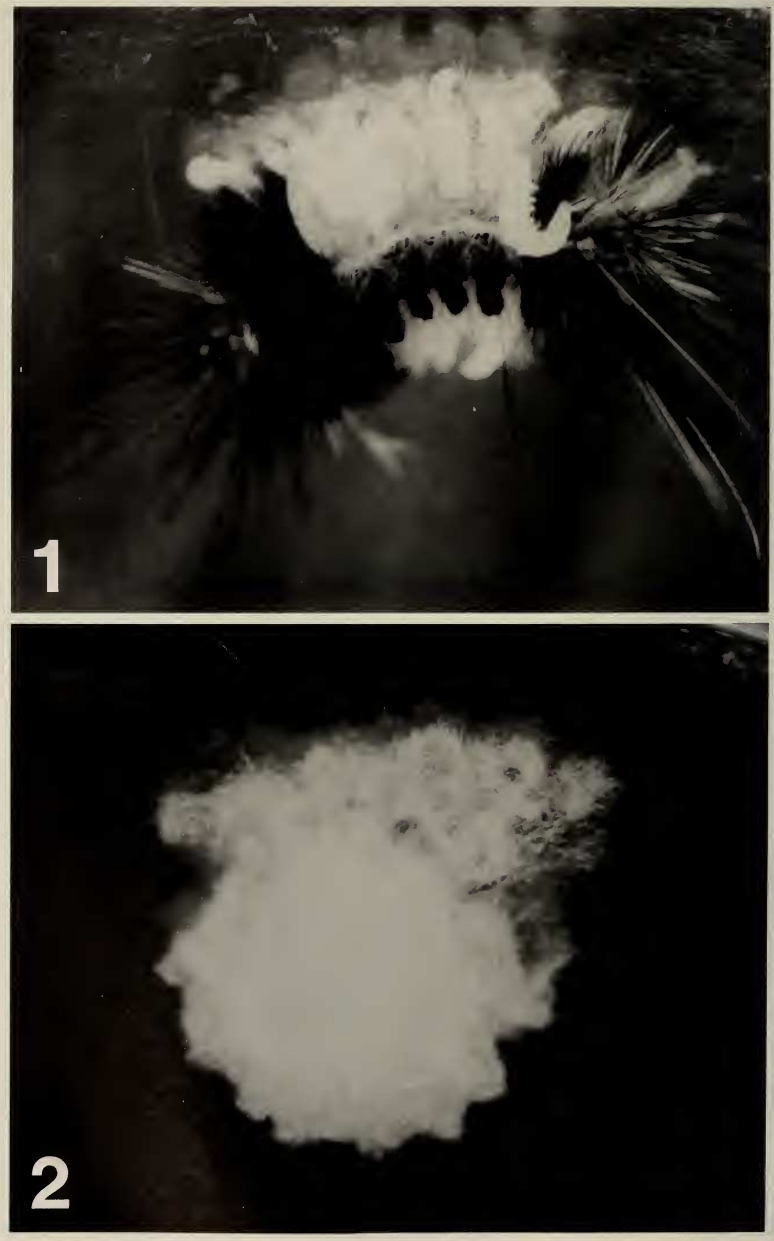
PARASITOID AND LARVAL FOOD PLANT RECORDS FOR THREE PERUVIAN MOTHS (ARCTIIDAE, SATURNIIDAE)

Additional key words: *Dysschema, Carales, Automeris,* Braconidae, Tachinidae.

The following are parasitoid and larval food plant records for three moths: two species of Arctiidae and one species of Saturniidae, reared from larvae found in the field. The larvae were collected during August and September of 1987, 31 km NE of Villa Rica in the Pasco Department of Peru. Identifications of moths were based on adults reared from larvae presumed to be the same as those parasitized.

Dysschema sacrifica (Hubner) (Arctiidae: Pericopinae) larvae and adults were very common. Larvae were reared on *Bidens* sp. (Asteraceae). Two *D. sacrifica* larvae (J87-34(1) and J87-34(2)) were hosts to *Cotesia* (Hymenoptera: Braconidae), probably representing two species. The braconid larvae in both cases emerged from the larvae and spun cocoons on the cuticle of their live hosts (35 cocoons were spun on J87-34(2)). The adult *Cotesia* eclosed from the cocoons over a period of several days, during which time the larvae walked rapidly around the rearing containers. *Cotesia* is a large, ubiquitous genus (over 1500 species) that parasitizes macrolepidoptera. Arctiids have been known to serve as hosts in North America (Mason, W. R. M. 1981, Mem. Entomol. Soc. Canada, 115:1–147).

A larva (J87-79) of *Carales astur* (Cramer) (Arctiidae: Arctiinae: Phaegopterini), feeding on *Citrus* sp. (Rutaceae), also hosted a braconid parasite, *Parapanteles* sp. Species of *Parapanteles* previously have been recorded as using Notodontidae and Noctuidae as hosts (Mason 1981, *op. cit.*), so this record broadens the known host range. The *Parapanteles* larvae emerged from the body of their host (Fig. 1), then left it and spun their



FIGS. 1, 2. Larvae of *Parapanteles* sp. exiting their host, a larva of *Carales astur* (Arctiidae) (Fig. 1), then spinning their cocoons on the side of the rearing container (Fig. 2).

cocoons together, in this case on the side of the plastic rearing container (Fig. 2). Sixteen *Parapanteles* adults were preserved.

Automeris liberia (Cramer) (Saturniidae: Hemileucinae) reared on *Bidens* sp. (Asteraceae), hosted parasitic flies of *Leptostylum* sp. (Diptera: Tachinidae). Thirty-three puparia resulted from the parasitization of a single caterpillar. No previous host records have been given for *Leptostylum* spp. (Arnaud, P. H. 1978, U.S. Dept. Agric., Misc. Pub. 1319:1–860; Guimaraes, J. H. 1977, Arq. Zool., S. Paulo 28(3):1–131), but species are known to occur in Mexico, Panama, and Brazil (Guimaraes, J. H. 1971, Mus. Zool., S. Paulo 104:1–333).

Representatives of the parasitoids reared have been deposited in the National Museum of Natural History in Washington, D.C., and duplicates in the Cornell University Insect Collection (CUIC) in Ithaca, New York. The parasitized larvae of *D. sacrifica* (J87-34(2)) and *C. astur* (J87-79) were preserved in KAAD, then EtOH, and have been deposited in the CUIC, along with a larva of *A. liberia* (J87-62(3)). The adult moths upon which the identifications were based have also been deposited in the CUIC. All vouchers in the CUIC are under lot number 1202.

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